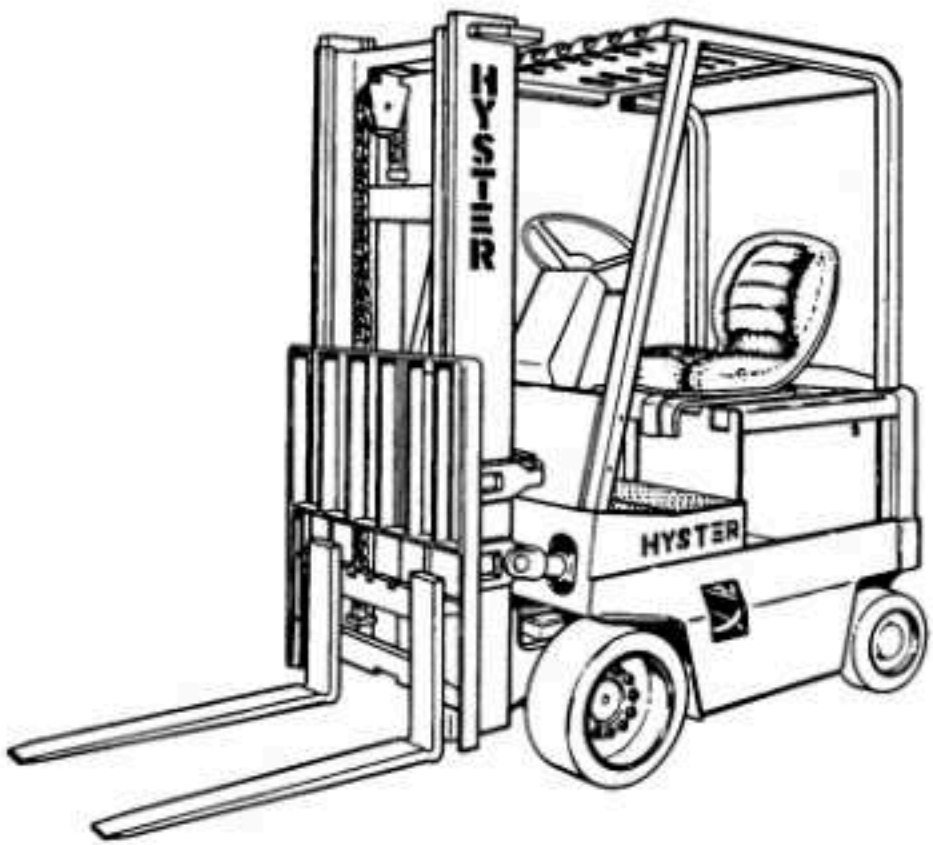
SERVICE MANUAL

E25-35XL (C114)



FORM 897131 Rev. 11/03

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E25-35XL (C114)
SERVICE MANUAL CONTENTS

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Legend for Figure 37

* Metric Formulas (All Dimensions are in Millimeters)
Class II Mast Type
Dimension E = (0.492 × Y) + (0.985 × Z) + 303
Example: Dimension E = (0.492 × Y) + (0.985 × Z) + 303 **Step 1.** Dimension E = (0.492 × 2482) + (0.985 × 2095) + 303 **Step 2.** Dimension E = 1221.1 + 2063.6 + 303 **Step 3.** Dimension E = 3284.7 + 303 **Step 4.** Dimension E = 3587.7
Dimension G Calculations are Similar to Dimension E Dimension G (3 Function) for Lift Heights of 2482 mm to 2982 mm: (1.982 × Y) + (0.985 × Z) − 801 Dimension G (3 Function) for Lift Heights of 3082 mm to 5482 mm: (1.991 × Y) + (0.985 × Z) − 917 Dimension G (4 Function) for Lift Heights of 2482 mm to 2982 mm (1.982 × Y) + (0.985 × Z) − 868 Dimension G (4 Function) for Lift Heights of 3082 mm to 5482 mm: (1.991 × Y) + (0.985 × Z) − 1046

* Inch Formulas (All Dimensions are in Inches)
Class II Mast Type
Dimension E = (0.492 × Y) + (0.985 × Z) + 11.938
Example: Dimension E = (0.492 × Y) + (0.985 × Z) + 11.938 **Step 1.** Dimension E = (0.492 × 97.7) + (0.985 × 82.5) + 11.938 **Step 2.** Dimension E = 48.1 + 81.3 + 11.938 **Step 3.** Dimension E = 129.4 + 11.938 **Step 4.** Dimension E = 141.34
Dimension G Calculations are Similar to Dimension E Dimension G (3 Function) for Lift Heights of 97.7 to 117.4: (1.982 × Y) + (0.985 × Z) − 31.531 Dimension G (3 Function) for Lift Heights of 121.3 to 215.8: (1.991 × Y) + (0.985 × Z) − 36.125 Dimension G (4 Function) for Lift Heights of 97.7 to 117.4: (1.982 × Y) + (0.985 × Z) − 34.156 Dimension G (4 Function) for Lift Heights of 121.3 to 215.8: (1.991 × Y) + (0.985 × Z) − 41.156
*All measurements are made with mast vertical and fully lowered.

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Troubleshooting Charger

Battery chargers normally operate automatically without constant attention. It is necessary to make a periodic check that the charger is operating correctly. Check for the following conditions:

1. Battery temperature is too high. The temperature in a battery will not normally rise more than 14°C (25°F) during an 8-hour charging period. Higher temperatures indicate the charging rate needs adjustment.
2. Continuous operation of the charger. Check the automatic controls on the charger. Check the charging rate. A low charging rate can be the problem.
3. Continuous operation of a charger at a high rate. Normally, the charging rate begins at a high rate and decreases as the battery becomes charged. If the rate does not decrease, the controls need repair or adjustment.

Knowing When Battery Is Fully Charged

WARNING

Always connect the positive cable to the positive terminal and connect the negative cable to the negative terminal. Any other connection will cause injury and damage.

Always charge the battery at the end of the work period (shift). Never let the specific gravity decrease to a level less than the limits shown in the manual.

Always de-energize the charger before you connect or disconnect the charger from the battery.

NEVER connect the battery charger plug to the plug of the lift truck. You can damage the traction control circuit. Make sure the charger voltage is the correct voltage for the battery.

1. During charging, the voltage increases slowly. When the battery is fully charged, the voltage level is constant.
2. Remove a vent cap and look in the opening. If you see bubbles in the electrolyte, the battery is either fully charged or in the final stage of charging.
3. The specific gravity reading is constant and within the limits of a charged battery. If the temperature increases after the battery is charged, the specific gravity will decrease a small amount.
4. Constant meter indications on the charger will indicate the end of the charging cycle.

WHERE TO CHARGE BATTERIES

To increase the service life and reduce maintenance, a special area is needed for charging the batteries. The following information is necessary for the design of this area:

- Location of power supply
- Ventilation; hydrogen gas comes from the batteries during charging
- Drains for cleaning the batteries
- Type and size of the batteries
- Type of lift trucks
- Distances the lift trucks must travel for service
- Safety regulations and instructions

Equipment Needed

- A lifting device to remove the battery from the lift truck
- Racks to hold the batteries during charging and storage (these racks must be made of wood or must not be metal; metal racks that are covered with an insulating material can be used)
- A battery charger that will charge your batteries
- Tools for maintenance
- An area with a drain for cleaning batteries and battery compartments
- Distilled water
- Air and water supplies for cleaning
- Maintenance records (see Figure 11 and Figure 12)
- A workbench
- Spare parts and repair equipment
- Protective clothing and safety equipment for handling batteries
- Water source for washing eyes and preventing acid burns
- Install a NO SMOKING sign in the service area
- Keep the charger in a clean, dry area with good ventilation

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